

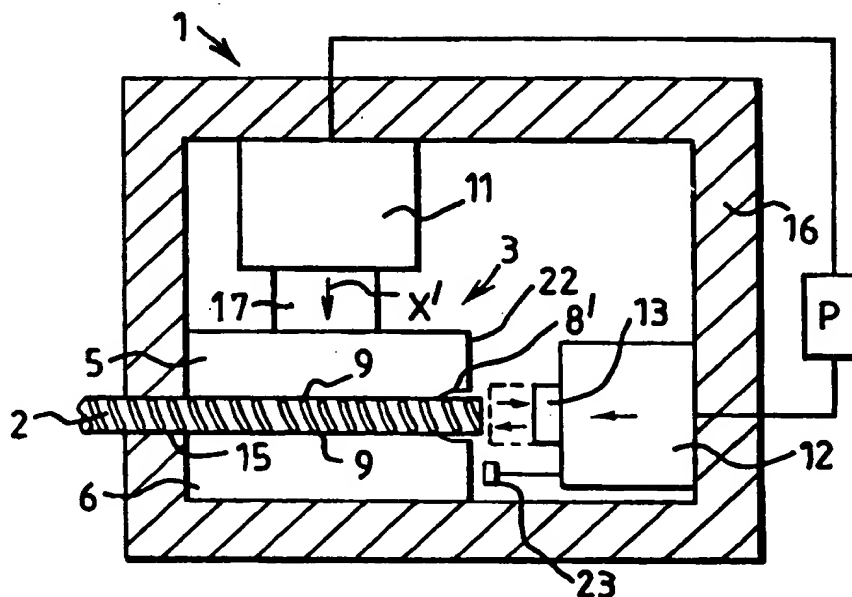
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<p>(21) International Application Number: PCT/GB99/00119</p> <p>(22) International Filing Date: 14 January 1999 (14.01.99)</p> <p>(30) Priority Data: 9800861.8 15 January 1998 (15.01.98) GB</p> <p>(71) Applicant (for BB only): JOHNSON, Terence, Leslie [GB/GB]; Edward Evans &amp; Co., Chancery House, 53-64 Chancery Lane, London WC2A 1SD (GB).</p> <p>(71)(72) Applicant and Inventor: AMORNTATKUL, Noppadol [TH/TH]; 53 Sukhumvit 101/1, Soi Prawitlehpuan 14, Bangchak, Prakanong Bangkok 10260 (TH).</p> <p>(72) Inventor; and</p> <p>(75) Inventor/Applicant (for US only): BÜHLER, Rainer [DE/DE]; Brunnenstrasse 19, D-72649 Wolfschlugen (DE).</p> <p>(74) Agent: JOHNSON, Terence, Leslie; Edward Evans &amp; Co., Chancery House, 53-64 Chancery Lane, London WC2A 1SD (GB).</p>		<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</p>	

(54) Title: FORGING OF WORKPIECES

(57) Abstract

The invention relates to apparatus for enlarging part of a metal workpiece by cold forging, characterised by an enlarging die (5, 6) and by the die having means (8, 8') to alleviate stress to the workpiece during forging.



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# INTERNATIONAL SEARCH REPORT

In: International Application No  
PCT/GB 99/00119

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 B21J5/08 B21F5/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 B21J B21F E04C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 653 809 A (TECHNIPORT SA) 3 May 1991  see page 4, line 14 - page 5, line 23; figures 1,4  ---	1-11, 13-16, 20-27
X	DE 197 19 578 A (DAVUM CONSTRUCTION S A) 2 January 1998  see column 2, line 17 - line 29; claim 1; figures  ---	1-6, 14-16, 20,26
A	GB 2 286 782 A (CCL SYSTEMS LTD) 30 August 1995 see claim 1  ---  -/--	1,15

☒ Further documents are listed in the continuation of box C.

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International Application No  
PCT/GB 99/00119

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 017, no. 443 (M-1463), 16 August 1993 & JP 05 098741 A (TOKYO TEKKO KK;OTHERS: 01), 20 April 1993 see abstract ---	1-11, 13-16, 20,26
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